

IN THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

Claims 1-8. (*Canceled*)

- 1 Claim 9. (*Currently Amended*) A method for coating fertilizer particles to impart to them slow plant
2 nutrient release comprising:
- 3 preheating to from about 125 to about 150 degrees F and drying said fertilizer particles;
4 simultaneously spraying said preheated particles with an isocyanate pre-polymer and a reacting
5 combination fluid comprising:
- 6 a polyol;
7 a methyl ester derivative of a plant or vegetable oil;
8 a polymerization catalyst; and
9 a powder extender;
- 10 reacting said isocyanate pre-polymer and said reacting combination fluid to form a polymer
11 coating on said fertilizer particles; and
12 cooling said coated fertilizer particles to form a slow release fertilizer product.

1 Claim ~~[[11]]~~ 10. (*Currently Amended*) The method of claim ~~[[10]]~~ 9, wherein said powder extender
2 in said reacting combination fluid comprises barium sulfate.

1 Claim ~~[[12]]~~ 11. (*Currently Amended*) The process of claim 9, wherein said reacting combination
2 fluid further comprises an oil-based dye.

1 Claim ~~[[13]]~~ 12. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said isocyanate pre-
2 polymer is selected from the group ~~comprising~~ consisting of diphenylmethane diisocyanate, toluene
3 diisocyanate, and polymeric diphenylmethane diisocyanate.

1 Claim ~~[[14]]~~ 13. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said polyol is selected
2 from the group ~~comprising~~ consisting of polyester polyol, polyether polyol, and polyethylene glycol.

1 Claim ~~[[15]]~~ 14. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said polymerization
2 catalyst is selected from the group ~~comprising~~ consisting of dibutyl tin dilaurate, triethylene diamine, and
3 methyl diethanol amine.

1 Claim ~~[[16]]~~ 15. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said methyl ester~~[[s]]~~
2 derivative of the plant or vegetable oil~~[[s are]]~~ is selected from the group consisting of methyl esters of
3 cotton seed oil, linseed oil, and soybean oil.

1 Claim ~~[[17]]~~ 16. (*Currently Amended*) The method of claim ~~[[16]]~~ 9, wherein said ~~combined~~
2 ~~reacting combination~~ fluid further comprises plant or vegetable oils selected from the group ~~comprising~~
3 ~~consisting of~~ cotton seed oil, linseed oil, waxes selected from the group comprising paraffin and micro-
4 crystalline waxes, and powders selected from the group ~~comprising~~ consisting of diatomaceous earth,
5 calcium carbonate, clays, and silica.

1 Claim ~~[[18]]~~ 17. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said spraying step and
2 reacting steps are repeated a number of times corresponding to the number of layers of coating desired
3 on said fertilizer particles.

1 Claim ~~[[19]]~~ 18. (*Currently Amended*) The method of claim ~~[[11]]~~ 10, wherein for each pound of
2 fertilizer particles coated, about six grams of ~~[[a]]~~ said isocyanate pre-polymer and ~~[[a]]~~ said reacting
3 combination fluid comprising about three grams polyether polyol, about three grams soy bean oil methyl
4 ester, about one-fourth gram dibutyl tin dilaurate catalyst, and about three grams barium sulfate are
5 applied by spraying.

1 Claim ~~[[20]]~~ 19. (*Currently Amended*) The method of claim ~~[[19]]~~ 18, wherein said reacting
2 combination fluid further comprises a quantity of oil-based dye.

1 Claim ~~[[21]]~~ 20. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said reacting
2 combination fluid further comprises ~~[[and]]~~ micro-nutrients, said micro-nutrients being selected from
3 the group ~~comprising~~ consisting of copper compounds and zinc compounds.

1 Claim ~~[[22]]~~ 21. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said reacting
2 combination fluid further comprises pesticides.

1 Claim ~~[[23]]~~ 22. (*Currently Amended*) The method of claim ~~[[19]]~~ 18, wherein said spraying step
2 and said reacting step are repeated plurality of times resulting in a corresponding plurality of coating
3 layers on said fertilizer particles.

1 Claim ~~[[24]]~~ 23. (*Currently Amended*) The method of claim ~~[[23]]~~ 22, wherein said spraying and
2 reacting steps are successively carried out in stages as said fertilizer particles travel through a multi-
3 stage coating drum resulting in fertilizer particles having four coatings.

1 Claim ~~[[25]]~~ 24. (*Currently Amended*) The method of claim ~~[[24]]~~ 23, wherein there are four
2 spraying and reacting steps carried out in four stages.

1 Claim ~~[[26]]~~ 25. (*Currently Amended*) The method of claim ~~[[11]]~~ 9, wherein said fertilizer particles
2 are selected from the group comprising granules, chunky granules, prills, pellets, extrusion, shot, lumps,
3 grains, crystals, and flakes.

Application No. : 10/682,347
Art Unit : 1793

Attorney Docket No. 21051.00
Confirmation No. 8743

1 Claim ~~[[27]]~~ 26. (*Currently Amended*) The method of claim ~~[[26]]~~ 25, wherein said fertilizer
2 particles consist of sulfate based fertilizers.

1 Claim ~~[[28]]~~ 27. (*Currently Amended*) The method of claim ~~[[27]]~~ 26, wherein said fertilizer particles
2 consist of potassium sulfate.

Claim ~~[[29]]~~ 28. (*Canceled*)